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Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

Fifty-third session
Geneva, 25 June-4 July 2018
Item 3 of the provisional agenda
Listing, classification and packing

Revision of packing instruction P801

Transmitted by the expert from Canada*

Introduction

1. At the forty-ninth, fifty-first and fifty-second sessions of the Sub-Committee, the expert from Canada presented formal and informal documents proposing modifications to packing instruction P801.

2. At its fifty-second session (see ST/SG/AC.10/C.3/104), the Sub-Committee held further discussions on the revision of packing instruction P801 (see ST/SG/AC.10/C.3/104, paragraph 52). Several experts shared the Canadian expert's concern regarding persons having trouble understanding and complying with the existing requirements of P801 as expressed in document ST/SG/AC.10/C.3/2017/44 and informal documents INF.52 and INF.61 (52nd session). Some experts were in favour of informal document INF.61 while others had some minor suggestions for further improvement. The Sub-Committee invited the expert from Canada to consider submitting a revised proposal to the fifty-third session. This formal proposal (ST/SG/AC.10/C.3/2018/21), reflects the outcome of the discussions raised during the fifty-second session and the work done subsequently.

3. The main change in this formal proposal compared to the proposals presented at the forty-nine, fifty-first and fifty-second sessions, is the modification to include only the general provisions references that packagings listed in packing instruction P801 are required to meet.

4. Other changes to current packing instruction P801 brought forward in this proposal include:

* In accordance with the programme of work of the Sub-Committee for 2017–2018 approved by the Committee at its eighth session (see ST/SG/AC.10/C.3/100, paragraph 98 and ST/SG/AC.10/44, para. 14).

(a) Modification of the structure of the packing instruction;

(b) Modification and clarification of certain packaging requirements such as the potential for release of electrolyte or the protection against short-circuits;

(c) Clarification of the requirements for the transport of batteries in what is currently referred to as "battery boxes"; and

(d) Modification of special packing provision PP16 of packing instruction P003 to permit the transport of used UN 2800 Batteries, wet, non-spillable in stainless steel or plastics bins in accordance with packing instruction P801(4).

5. To summarize what has been identified and discussed during prior sessions, the current packing instruction P801:

(a) Does not address batteries that are likely to leak electrolyte. Batteries may be likely to leak electrolyte because of damage to their casing or by design if they are of the flooded type with vented caps. The potential release of electrolyte should be minimized to promote the safe handling and transport of batteries.

(b) Permits the transport of used batteries loosely in "battery boxes". However, it is not clear to the expert from Canada how used batteries can be transported loose and meet the additional requirements listed in P801 (e.g., packaged or secured to prevent inadvertent movement). Furthermore, the concept of "battery box" is not consistent with the definition of a box found in sub-section 1.2.1 of the Recommendations.

(c) Requires that every battery transported under this packing instruction be protected against short-circuits. However, this requirement might be overly stringent for used batteries transported for disposal or recycling, which are likely to contain little to no charge.

6. At the fifty-second session, the expert from Canada proposed modifications to the general provisions references listed in packing instruction P801. Some delegations questioned whether general provision 4.1.1 could apply to stainless steel and plastics bins, since they may not be considered as "packagings" if they do not have covers. However, if we apply that same logic to the other packagings currently listed in packing instruction P801, wooden slatted crates and pallets would not be considered as packagings and thus, could not be required to comply with general provision 4.1.1.

7. Lastly, as expressed by some delegations at the fifty-second session and building on the requirements of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), the expert from Canada is proposing to amend special packing provision PP16 in packing instruction P003 to permit the transport of used UN 2800 batteries in stainless steel or plastics bins in accordance with packing instruction P801(4).

Proposal

8. Amend packing instruction P801 in 4.1.4.1 of Chapter 4.1 to read as follows (new text is underlined and deleted text ~~struck through~~):

P801	PACKING INSTRUCTION	P801
This instruction applies to ~~new and used batteries assigned to~~ UN Nos. 2794, 2795 or 3028		
The following packagings are authorized, provided that the ~~general~~ provisions of 4.1.1.1, 4.1.1.2, 4.1.1.6 ~~4.1.1, except 4.1.1.3~~, and **4.1.3** are met: (1) Rigid outer packagings; (2) Wooden slatted crates; (3) Pallets. Additionally, the following conditions shall be met: (a) Batteries stacks shall be in tiers separated by a layer of electrically non-conductive material; (b) Battery terminals shall not support the weight of other superimposed elements; (c) Batteries shall be packaged or secured to prevent inadvertent movement; (d) Batteries shall not leak under normal conditions of transport or appropriate measures shall be taken to prevent the release of electrolyte from the package (e.g. individually packaging batteries or other equally effective methods); and (e) Batteries shall be protected against short circuits. (4) ~~Used storage batteries may also be transported loose in~~ Stainless steel or plastics bins may be used to transport used batteries ~~battery boxes capable of containing any free liquid~~. Additionally, the following conditions shall be met: (a) The bins shall be resistant to the electrolyte contained in the batteries; (b) The bins shall not be filled to a height greater than the height of their sides; (c) The outside of the bins shall be free of residues of electrolyte contained in the batteries; (d) Under normal conditions of transport, no electrolyte shall leak from the bins; (e) Measures shall be taken to ensure that filled bins cannot lose their content; and (f) Measures shall be taken to prevent short circuits.		
~~**Additional requirements:**~~ ~~1. Batteries shall be protected against short circuits~~ ~~2. Batteries stacked shall be adequately secured in tiers separated by a layer of electrically non-conductive material.~~ ~~3. Battery terminals shall not support the weight of other superimposed elements.~~ ~~4. Batteries shall be packaged or secured to prevent inadvertent movement.~~		

9. Amend special provision PP16 in packing instruction P003 in 4.1.4.1 of Chapter 4.1 to read as follows (new text is underlined):

"PP16 "For UN2800, batteries shall be protected from short circuit within the packaging. Used batteries may be transported in accordance with packing instruction P801 (4).".

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Sub-Committee of Experts on the Transport of Dangerous Goods

Fifty-third session
Geneva, 25 June-4 July 2018
Item 5 (b) of the provisional agenda
Transport of gases: miscellaneous

Clarification of a marking provision for UN pressure receptacles

Transmitted by the International Organisation for Standardisation (ISO)*

Introduction

1. The proposal in this document is a revised version of proposal 2 presented at the fifty first session in document ST/SG/AC.10/C.3/2017/18. This new proposal has been reworded to take account of comments made on the original proposal.

Proposal

2. Add the following new Note immediately after 6.2.2.7.2 (c):

"***NOTE*:** For the purpose of this mark the country of approval shall be understood to be the country of the competent authority that either carried out the initial inspection and test of the individual receptacle at the time of manufacture or delegated that initial inspection and test to an inspection body in accordance with 6.2.2.5.2.2.".

* In accordance with the programme of work of the Sub-Committee for 2017–2018 approved by the Committee at its eighth session (see ST/SG/AC.10/C.3/100, paragraph 98 and ST/SG/AC.10/44, para. 14).

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Justification

3. Paragraph 6.2.2.7.2 of the Model Regulations specifies the "certification marks" on a pressure receptacle. These are:

(a) the United Nations packaging symbol …;

(b) the technical standard (e.g. ISO 9809-1) used for design, manufacture and testing;

(c) the character(s) identifying the country of approval as indicated by the distinguishing sign used on vehicles in international traffic;

(d) the identity mark or stamp of the inspection body that is registered with the competent authority of the country authorizing the marking;

(e) the date of the initial inspection, the year (four digits) followed by the month (two digits) separated by a slash (i.e. "/");

4. In Europe, where a type approval may be obtained from one country and then the manufacturer may select an inspection body from another country for the initial inspection, questions were asked as to whether the country of approval referred to the approval of the type or the approval at the time of initial inspection. The concept of the drafters of the marking text in 6.7.7.2 was to ensure traceability to the inspection body that inspected the individual pressure receptacle. The identity of the body applying the initial inspection mark may need to be verified by enquiry to the competent authority, hence the need arises to identify the country. The details of the type approval would be recovered from the manufacturer that is also obliged to apply its mark and the type approval is also known to the body applying the initial inspection mark. If the country of type approval were marked, it may be very difficult to identify the body carrying out the initial inspection unless its appointing country is also marked.

5. Space on a gas cylinder is limited and the country of manufacture and the country approving the individual cylinder is already identified, to add details of the type approval is not really feasible.

6. Some members of the Sub-Committee expressed their opinion that the initial inspection should be carried out by the same body that carried out the type approval. However, 6.2.2.5.5 *Production inspection and certification* states:

> "The inspection body selected by the manufacturer for inspection and testing during production may be different from the inspection body used for the design type approval testing."

7. One comment on the original proposal objected to defining the country of approval as being anything other than the country approving the type. This new note therefore starts with the phrase "For the purpose of this mark…" so that this interpretation is restricted to this application and is not taken as a general definition.

8. Another commenter pointed out that the conformity assessment system of 6.2.2.5, to which these marking requirements apply, specified that the appointment of an inspection body was optional (see 6.2.2.5.2.2) and the competent authority may itself carry out conformity assessment. The note has therefore been expanded to describe both options.

9. Discussions in Europe culminated in the adoption of a Note into the RID/ADR similar to that above and repeated in document ST/SG/AC.10/C.3/2017/18. However, elsewhere in the world, the question is still asked and sometimes the wrong alternative is employed. ISO requests that this issue is clarified by adoption of the Note proposed above.

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Sub-Committee of Experts on the Transport of Dangerous Goods

Fifty-third session
Geneva, 25 June-4 July 2018
Item 5 (b) of the provisional agenda
Transport of gases: miscellaneous

New and updated ISO standards in Class 2

Transmitted by the International Organisation for Standardisation (ISO)*

Introduction

1. These proposals concern five standards of which three are new standards, one is a revised standard and one is an amendment.

The titles of the standards are:

- ISO 10156:2017 Gas cylinders – Gases and gas mixtures – Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets;
- ISO 11119-4:2016 Gas cylinders – Refillable composite gas cylinders – Design, construction and testing – Part 4: Fully wrapped fibre reinforced composite gas cylinders up to 150 l with load-sharing welded metallic liners.
- ISO 14246:2014 + Amd.1:2017 Gas cylinders — Cylinder valves — Manufacturing tests and examinations;
- ISO 17879:2017 Gas cylinders – Self-closing cylinder valves – Specification and type testing;
- ISO 20475:2018 Gas cylinders -- Cylinder bundles -- Periodic inspection and testing;

* In accordance with the programme of work of the Sub-Committee for 2017–2018 approved by the Committee at its eighth session (see ST/SG/AC.10/C.3/100, paragraph 98 and ST/SG/AC.10/44, para. 14).

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2. The usual arrangements have been made with the Secretariat to circulate PDF copies of these documents to the Experts.

3. Also, it is proposed to delete a superseded standard for periodic inspection of acetylene cylinders.

Proposal 1

4. Replace 'ISO 10156:2010' with 'ISO 10156:2017' in the following places: 2.2.2.1 (a) (ii), in the ***NOTE*** following 2.2.2.1 (b) (iii), in 2.2.3 (a) and in 2.2.3 (d).

Justification

5. ISO 10156:1996 was referenced at least as long ago as the twelfth revised edition of the Model Regulations for the tests and calculation of flammability. The fifteenth revised edition of the Model Regulations saw the introduction of ISO 10156-2:2005 which added the methods of test and calculation for oxidising ability. These two standards were subsequently merged into ISO 10156:2010. ISO 10156:2017 updates the standard by adding a calculation method for determining the lower flammability limit of gas mixtures.

Proposal 2

6. In 6.2.2.1.1 add the following new row to the end of the table (after ISO 11119-3:2013):

ISO 11119-4: 2016	Gas cylinders – Refillable composite gas cylinders – Design, construction and testing – Part 4: Fully wrapped fibre reinforced composite gas cylinders up to 150 l with load-sharing welded metallic liners	Until further notice

Justification

7. The first three parts of the ISO 11119 series cover various designs of composite cylinders with a seamless liner. This fourth part defines the requirements for design, construction and testing of composite cylinders with a welded metallic liner. This proposal was previously included in paper ST/SG/AC.10/C.3/2017/17 presented at the fifty first session of this Sub Committee. The proposal was withdrawn for further discussion on technical issues which are all now resolved.

Proposal 3

8. In 6.2.2.3 in the row starting ISO 14246:2014 replace 'Until further notice' with 'Until 31 December 2024'. Insert a new row beneath this row as follows:

ISO 14246:2014 + Amd 1:2017	Gas cylinders – Cylinder valves – Manufacturing tests and examinations	Until further notice

Justification

9. This is a short amendment specifying the pressures to be used in the pressure test and leakproofness test of acetylene valves.

Proposal 4

10. In 4.1.6.1.8 after the paragraph starting 'For pressure receptacles with valves ...' and ending '...annex A of ISO10297:2014 shall be met.' Insert a new paragraph as follows:

"For pressure receptacles with self-closing valves with inherent protection, the requirements of annex A of ISO 17879:2017 shall be met."

11. In the table in 6.2.2.3 add a new row at the end as follows:

ISO 17879:2017	Gas cylinders – Self-closing cylinder valves – Specification and type testing	Until further notice

Justification

12. ISO 17879:2017 is a new standard for self-closing valves which are used for calibration gases and gases used in the beverage industry although they may be found in other applications such as medical gases. It is not applicable to liquefied petroleum gases.

Proposal 5

13. In 6.2.2.4 add a new row at the end of the first table immediately after the row starting ISO 22434:2006 as follows.

ISO 20475:2018	Gas cylinders – Cylinder bundles – Periodic inspection and testing	Until further notice

Justification

14. The standard ISO 10961:2010, which gives the requirements for the design construction and initial inspection and test for bundles of cylinders, has been in the Model Regulations since the 18th revision but there has been no detailed procedure for their periodic inspection and test. The standard ISO 20475 provides this detailed procedure. As well as covering periodic inspection, the standard also establishes general principles for the maintenance of bundles of cylinders.

Proposal 6

Justification

15. In 6.2.2.4 delete the row for ISO 10462:2005.

16. ISO 10462:2005 Gas cylinders – Transportable cylinders for dissolved acetylene – Periodic inspection and maintenance, is no longer applicable after the end of 2018 and this reference should be deleted from the table in 6.2.2.4.

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Sub-Committee of Experts on the Transport of Dangerous Goods

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Item 5 (b) of the provisional agenda
Transport of gases: miscellaneous

Update of LC_{50} values in P200

Transmitted by the International Organisation for Standardisation (ISO)*

Introduction

1. When the LC_{50} values of the toxic gases were added to P200, ISO 10298:1995 *Gas cylinders - Gases and gas mixtures - Determination of toxicity for the selection of cylinder valve outlets* was used as the reference source. These values were verified by the National Institute of Standards and Technology (NIST) in the United States of America and The Federal Institute for Materials Research and Testing (BAM) in Germany. The 1995 version of this standard has been updated twice, in 2010 and 2018. This has prompted a review of the values in P200 in the twentieth revision of the Model Regulations and there are eight toxic gases which show different values from the ISO standard. It is therefore proposed that P200 is aligned with ISO 10298:2018.

Proposal

2. The table below show the LC_{50} values in ml/m^3 for eight toxic gases both in 4.1.1.4 P200 Table 2 (twentieth revision) and in ISO 10298:2018 Annex B, Table B.1. It is proposed that the values shown in the far-right column replace those currently in the Model Regulations.

* In accordance with the programme of work of the Sub-Committee for 2017–2018 approved by the Committee at its eighth session (see ST/SG/AC.10/C.3/100, paragraph 98 and ST/SG/AC.10/44, para. 14).

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UN No.	Proper Shipping Name	LC_{50} in ml/m³ in P200, 20th Rev.	LC_{50} in ml/m³ in ISO 10298:2010
1008	BORON TRIFLUORIDE	387	864
1859	SILICON TETRAFLUORIDE	450	922
2188	ARSINE	20	178
2196	TUNGSTEN HEXAFLUORIDE	160	218
2198	PHOSPHOROUS PENTAFLUORIDE	190	261
2202	HYDROGEN SELENIDE	2	51
2534	METHYLCHLOROSILANE	600	2 810
2676	STIBINE	20	178

Justification

3. ISO 10298:2018 and its previous 2010 edition were based on wide-ranging research into the latest toxicological data on these gases and the standard lists the references on which these LC_{50} values were based. The 1995 edition has proved to be a sound basis for P200 and there are relatively few changes given the fact that scientific knowledge continues to advance.

4. It is acknowledged by the proposers that all these changes show that these gases are less toxic than previously believed and therefore the Sub-Committee may wish to seek independent advice before agreeing to this proposal.

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Item 3 of the provisional agenda
Listing, classification and packing

Clarification of performance testing requirements for infectious substances packaging in Chapter 6.3

Transmitted by the expert from Canada*

Introduction

1. This paper proposes modifications to clarify the performance testing requirements for infectious substances packaging, as outlined in Chapter 6.3 of the Model Regulations.

2. The Table in 6.3.5.2.2, entitled "Tests required for packaging types" outlines the tests and number of samples required for the performance testing of packagings for transporting infectious substances. Within the table, the column entitled "Additional drop 6.3.5.3.6.3", requires an additional drop test be performed when the packaging is intended to contain dry ice. An "Explanation for use of the table" is provided below the table. The explanation indicates that "if the packaging is intended to contain dry ice, then one further single sample shall be dropped five times after conditioning in accordance with 6.3.5.3.6.3."

* In accordance with the programme of work of the Sub-Committee for 2017–2018 approved by the Committee at its eighth session (see ST/SG/AC.10/C.3/100, paragraph 98 and ST/SG/AC.10/44, para. 14).

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"6.3.5.2.2 Tests and number of samples required

Tests required for packaging types

Type of packaging [a]			Tests required					
Rigid outer packaging	**Primary receptacle**		**Water spray 6.3.5.3.6.1**	**Cold conditioning 6.3.5.3.6.2**	**Drop 6.3.5.3**	**Additional drop 6.3.5.3.6.3**	**Puncture 6.3.5.4**	**Stack 6.1.5.6**
	Plastics	**Other**	**No. of samples**	**No. of samples**	**No. of samples**	**No. of samples**	**No. of samples**	
Fibreboard box	x		5	5	10	Required on one sample when the packaging is intended to contain dry ice.	2	Required on three samples when testing a "U"-marked packaging as defined in 6.3.5.1.6 for specific provisions.
		x	5	0	5		2	
Fibreboard drum	x		3	3	6		2	
		x	3	0	3		2	
Plastics box	x		0	5	5		2	
		x	0	5	5		2	
Plastics drum/ jerrican	x		0	3	3		2	
		x	0	3	3		2	
Boxes of other material	x		0	5	5		2	
		x	0	0	5		2	
Drums/ jerricans of other material	x		0	3	3		2	
		x	0	0	3		2	

[a] *"Type of packaging" categorizes packagings for test purposes according to the kind of packaging and its material characteristics.".*

Explanation for use of the table:

If the packaging to be tested consists of a fibreboard outer box with a plastics primary receptacle, five samples must undergo the water spray test (see 6.3.5.3.6.1) prior to dropping and another five must be conditioned to – 18 °C (see 6.3.5.3.6.2) prior to dropping. **If the packaging is to contain dry ice then one further single sample shall be dropped five times after conditioning in accordance with 6.3.5.3.6.3."**

"6.3.5.3.6.3 Packagings intended to contain dry ice – Additional drop test

Where the packaging is intended to contain dry ice, a test additional to that specified in 6.3.5.3.1 and, when appropriate, in 6.3.5.3.6.1 or 6.3.5.3.6.2 shall be carried out. One sample shall be stored so that all the dry ice dissipates and then that sample shall be dropped in one of the orientations described in 6.3.5.3.2 which shall be that most likely to result in failure of the packaging."

3. The text in explanation (in bold) is inconsistent with the requirement written in 6.3.5.3.6.3, which requires one sample be dropped in one of the orientations described in 6.3.5.3.2 and which shall be the one most likely to result in failure of the packaging. The explanation should not indicate that a sample be dropped five times, since 6.3.5.3.6.3 only indicates one drop. In addition, we find that requiring one sample to be dropped five times in one orientation would not be consistent with drop testing requirements applicable to other packagings. In order to correct the inconsistency between the "Explanation for use of the table" in 6.3.5.2.2 and the requirement outlined in 6.3.5.3.6.3, the expert from Canada proposes to remove the wording "five times" in the "Explanation for use of the table" in 6.3.5.2.2.

4. The "Explanation for use of the table" in 6.3.5.2.2 also states that the sample (intended to contain dry ice) be dropped "after conditioning". This contradicts the requirements of 6.3.5.3.6.3, which states that the additional drop test is a test additional to all other tests, including the conditioning requirements. In order to correct the inconsistency between the "Explanation for use of the table" in 6.3.5.2.2 and the requirements outlined in 6.3.5.3.6.3, the expert from Canada proposes to remove the wording "after conditioning" in the "Explanation for use of the table" in 6.3.5.2.2.

5. Other modifications to Chapter 6.3 brought forward in this proposal include:

(a) Modification to 6.3.5.3.1: 6.3.5.3.1 indicates that a drop test be performed but does not make any reference to the two associated but stand-alone clauses below it (6.3.5.3.2 and 6.3.5.3.3) which specify the drop test orientations for different packagings. The expert from Canada proposes to modify 6.3.5.3.1 to refer to "6.3.5.3.2 or 6.3.5.3.3, as appropriate";

(b) Modification to 6.3.5.3.3: 6.3.5.3.3 specifies the drop test orientations for drums, however, the table in 6.3.5.2.2, specifies that an outer packaging for infectious substances could be a jerrican. The expert from Canada proposes to modify 6.3.5.3.3 to include the term "jerricans" to account for this type of outer packaging;

(c) Modification to 6.3.5.3.3 (a) and (b): 6.3.5.3.3 (a) and (b) only specify drop orientations for packagings with chimes. To account for packagings which do not have chimes, the expert from Canada proposes to modify clause 6.3.5.3.3 (a) by borrowing the words of clause 6.1.5.3.1 to also indicate "or if the packaging has no chime on the top circumferential seam or edge" and to modify 6.3.5.3.3 (b) to indicate "or if the packaging has no chime on the base circumferential seam or edge";

(d) Modification to 6.3.5.3.3 (c): Clause 6.3.5.3.3 (c) specifies the drop orientation "flat on the side". To account for cylindrical drums which do not have "a side", the expert from Canada proposes to modify this sentence to indicate "flat on the body or side";

(e) Modification to 6.3.5.3.6.3: 6.3.5.3.6.3 specifies that a sample shall be dropped in one of the orientations described in 6.3.5.3.2. However, 6.3.5.3.2 only describes the drop test orientations for boxes, and does not account for orientations specific to drums or jerricans. The expert from Canada proposes to modify 6.3.5.3.6.3 to refer to both 6.3.5.3.2 "or 6.3.5.3.3, as appropriate", to account for the drop orientations for boxes as well as for drums and jerricans.

Proposal

6. Amend the first paragraph of the "Explanation for use of the table" in 6.3.5.2.2 to read as follows (deleted text in ~~strikethrough~~):

"*Explanation for use of the table:*

If the packaging to be tested consists of a fibreboard outer box with a plastics primary receptacle, five samples must undergo the water spray test (see 6.3.5.3.6.1) prior to dropping and another five must be conditioned to – 18 °C (see 6.3.5.3.6.2) prior to dropping. If the packaging is to contain dry ice then one further single sample shall be dropped ~~five times after conditioning~~ in accordance with 6.3.5.3.6.3.".

7. Amend 6.3.5.3.1 to read as follows (new text underlined):

6.3.5.3.1 Samples shall be subjected to free-fall drops, in accordance with 6.3.5.3.2 or 6.3.5.3.3, as appropriate, from a height of 9 m onto a non-resilient, horizontal, flat, massive and rigid surface in conformity with 6.1.5.3.4.

8. Amend 6.3.5.3.3 to read as follows (new text underlined):

6.3.5.3.3 Where the samples are in the shape of a drum or jerrican, three shall be dropped one in each of the following orientations:

(a) diagonally on the top chime or if the packaging has no chime on the top circumferential seam or edge with the centre of gravity directly above the point of impact;

(b) diagonally on the base chime, or if the packaging has no chime on the base circumferential seam or edge;

(c) flat on the body or side.

9. Amend 6.3.5.3.6.3 to read as follows (new text underlined):

6.3.5.3.6.3 Packagings intended to contain dry ice – Additional drop test

Where the packaging is intended to contain dry ice, a test additional to that specified in 6.3.5.3.1 and, when appropriate, in 6.3.5.3.6.1 or 6.3.5.3.6.2 shall be carried out. One sample shall be stored so that all the dry ice dissipates and then that sample shall be dropped in one of the orientations described in 6.3.5.3.2, or 6.3.5.3.3, as appropriate, which shall be that most likely to result in failure of the packaging.